

## CLAIM AMENDMENTS

1. **(Currently Amended)** A fibre channel switch comprising:
  - a first set of input/output modules, each input/output module having a plurality of fibre channel ports;
  - a first set of fabric switch modules to provide connections between the fibre channel ports;
  - a first backplane receiving the first set of input/output modules and the first set of fabric switch modules, the backplane having connectors to provide connectivity between the first set of input/output modules and the first set of fabric switch modules;
  - a second backplane receiving a second set of input/output modules and a second set of fabric switch modules and connectors providing connectivity between the second set of input/output modules and the second set of fabric switch modules, each input/output module of the second set having a plurality of fibre channel ports; and
  - a first connection between the second set of input/output modules and one of the first set of fabric switch modules bypassing the second set of fabric switch modules, thereby allowing the one of the first set of fabric switch modules to provide direct connections to the fibre channel ports on the second set of input/output modules without the direct connections passing through any of the second set of fabric switch modules.
- 2-5 **Previously Cancelled.**
6. **(Previously Amended)** The fibre channel switch of Claim 1 wherein the first connection utilizes jumper plugs.
7. **(Previously Amended)** The fibre channel switch of Claim 1 wherein the first and second sets of input/output modules provide up to 128 fibre channel ports.
8. **(Previously Amended)** The fibre channel switch of Claim 1 further comprising third and fourth backplanes having the third and fourth sets of input/output modules.

9. **(Previously Amended)** The fibre channel switch of Claim 8 further comprising second and third connections between the one of the first set of switch modules and the third and fourth input/output modules respectively to provide up to 256 fibre channel ports and to allow the one of the first set of fabric switch modules to provide direct connections to the fibre channel ports on the third and fourth set of input/output modules.
10. **(Original)** The fibre channel switch of Claim 1 wherein each fabric switch module provides a switch having 16 x 16 switch connectivity.
11. **(Previously Amended)** The fibre channel switch of Claim 1 wherein each of said fabric switch modules are logically decoupled into two separate logical switches.
12. **(Previously Amended)** The fibre channel switch of Claim 1 wherein said fabric switch module receives fibre channel frames at speeds of at least one gigabit per second.
13. **(Original)** The fibre channel switch of Claim 1 wherein at least one of the plurality of fabric switch modules is a redundant fabric switch module.
14. **(Original)** The fibre channel switch of Claim 1 wherein the first set of connections is provided by through backplane pins.
15. **(Original)** The fibre channel switch of claim 1 wherein the plurality of fabric switch modules are crossbar switches.
16. **(Currently Amended)** A fibre channel switch comprising:  
a first chassis including:  
a plurality of input/output modules, each input/output module having a plurality of fibre channel ports;

a plurality of fabric switch modules forming at least one switch to provide connections between the fibre channel ports;

a backplane receiving the plurality of input/output modules and the fabric switch modules, the backplane having connectors to provide connectivity between the input/output modules and the fabric switch modules of the first chassis;

a second chassis also having a plurality of input/output modules and a plurality of fabric switch modules, the input/output modules of the second chassis having a plurality of fibre channel ports; and

a connection bypassing the fabric switch modules of the second chassis by providing direct communication between the input/output modules of the second chassis and the fabric switch modules of the first chassis, thereby allowing the fabric switch modules of the first chassis to provide direct connections to the fibre channel ports on the input/output modules of the second chassis without the direct connections passing through any of the fabric switch modules of the second chassis.

17. **(Previously Amended)** The fibre channel switch of Claim 16 wherein the connectors provide two sets of connections between each input/output module and the plurality of fabric switch modules in the first chassis.
18. **(Original)** The fibre channel switch of Claim 17 wherein each fabric switch module provides two switches, each switch having one of said two sets of connections to the input/output modules.
19. **(Previously Amended)** The fibre channel switch of Claim 18 wherein the fibre channel switch provides up to 64 fibre channel ports.
20. **(Original)** The fibre channel switch of Claim 17 further comprising a plurality of loopback plugs for one of said two sets of connections.
21. **(Previously Amended)** The fibre channel switch of Claim 16 wherein the fibre channel switch provides up to 128 fibre channel ports.

22. **(Original)** The fibre channel switch of Claim 19 wherein each fabric switch module provides one switch.
23. **(Previously Amended)** The fibre channel switch of Claim 21 wherein the connectors are configured to provide a first set of connections between the input/output modules and the fabric switch modules of the first chassis .
24. **(Previously Amended)** The fibre channel switch of Claim 23 wherein the connection utilizes a plurality of jumper plugs.
25. **(Previously Amended)** The fibre channel switch of Claim 16 further comprising a third and fourth chassis to provide up to 256 fibre channel ports.
26. **(Original)** The fibre channel switch of Claim 16 wherein a plurality of connectors in each chassis are horizontal fabric switch connectors providing horizontal connectivity to the at least one switch.
27. **(Original)** The fibre channel switch of Claim 25 wherein the at least one switch in each chassis has one set of connections to the input/output modules of each chassis.

**28-33 Previously Cancelled**

34. **(Currently Amended)** A fibre channel switch comprising:
- a) at least one chassis having:
    - 1) at least one input/output module having a plurality of ports for receiving communications from outside the switch;
    - 2) at least one switching module not having any ports for receiving communication from outside the switch, the switching module receiving communication only from the at least one input/output module, the switching module providing a plurality of communication paths between ports;

- 3) a hardwired connection directly between each input/output module and each switching module within a single chassis without the hardwired connection passing through any switching module or input/output module; and
- 4) a jumper connection leading from each input/output module and from each switching module directly to at least one jumper connection site without the jumper connection passing through any switching module or input/output module;

wherein the at least one jumper connection site can be configured to connect input/output modules to switching modules within the same chassis.

35. **(Previously Submitted)** The fibre channel switch of claim 34, wherein two connections exist between each input/output module and each switching module within the same chassis.
36. **(Previously Submitted)** The fibre channel switch of claim 35, wherein each switching module is a single physical module logically decoupled into two separate, equal-sized logical switches, with each logical switch having a single connection to each input/output module within the same chassis.
37. **(Previously Submitted)** The fibre channel switch of claim 34, wherein the switch has two chassis, and the jumper connection sites are configured to connect each of the input/output modules of the first chassis with each of the switching modules in the second chassis.
38. **(Previously Submitted)** The fibre channel switch of claim 37, wherein the jumper connection sites are configured to connect each of the switching modules of the first chassis with each of the input/output modules second chassis.
39. **(Previously Submitted)** The fibre channel switch of claim 34, wherein the switch has four chassis, and each input/output module in each chassis is connected to all the switching modules in the four chassis, further wherein each switching

module in each chassis is connected to all the input/output modules in the four chassis.

40. **(Previously Submitted)** The fibre channel switch of claim 39, wherein each switching module consists of two physical modules logically coupled together into a single logical switch.
41. **(Previously Submitted)** The fibre channel switch of claim 40, wherein one half of the hardwired connections are used to connect the input/output modules of the first chassis to the switching modules of the first chassis, the second half of the hardwired connections are used to connect the input/output module of the first chassis to the switching modules of the second chassis; and the at least one jumper connection site in the first chassis is configured so that one half of the jumper connections are used to connect the input/output module of the first chassis to the switching modules of the third chassis, and so that the second half of the jumper connections are used to connect the input/output module of the first chassis to the switching modules of the fourth chassis.